



VG3800

OUTLINE SPECIFICATION



1. GENERAL INFORMATION

TYPE:	VG3800 tdw multi purpose vessel of all double hull construction, designed for the carriage of voluminous project cargo on the hatches or in open hold condition as well as bulk products, such as grain, fertilizer, ore, etc, timber and containers. (It is uncertain if USCG will accept the vessel to have an open top notation.)
TONNAGE:	< GT 3000 (acc. Convention 1969)
DEADWEIGHT:	Approx. 3.650 tdw (MT) at 5,35 m. draft. Approx. 1.470 tdw (MT) at 3,35 m. draft. (Open Top)
CLASS:	Lloyds register of shipping.
CLASS NOTATION:	LR 100 A1, general Cargo Vessel, Open top, Geared, LMC, UMS, Unrestricted
SERVICE:	Sea going service. GMDSS A3. Engine room according to Dutch shipping inspectorate "O" watch or equivalent.
FUEL:	Gas oil (ISO 8217 DMX/DMA) for all engines on board.
NAVIGATION:	Intended sailing area, North Sea, summer Baltic and Mediterranean.

2. PRINCIPAL DIMENSIONS

LENGTH OVER ALL:	89,95	m.
LENGTH BETWEEN PP:	84,90	m.
BREADTH MOULDED:	14,00	m.
MAIN ENGINE POWER MCR:	1.520	kW
SPEED, TRIAL CONDITION 2000 KW MCR:	13	knots



3. CARGO HOLD

ONE BOX SHAPED OLD, TOTAL CAP. APPROX:	178.300	cu ft
HOLD CLEARANCE (ONE OLD):	56,00 x 11,00 x 8,2	m.
MAX LOAD ON TT.:	15,0	t/m ²
IMO LOAD CASE STEEL COILS:	included	
TYPE OF HATCH COVERS:	flush top pontoon	
HATCH DIMENSIONS:	6,3 x 11,6 x 0,5	m.
GRAIN BULKHEADS:	2 x 2 halve height	m.

4. TANK CAPACITIES

WATER BALLAST:	1.530	m ³
FRESH WATER:	44	m ³
FUEL OIL:	305	m ³
LUBRICATION OIL:	10	m ³
SEWAGE WATER:	14,2	m ³
BILGE WATER COLLECTING:	5,4	m ³

Bunker capacity designed for continuous sailing period of 40 days.

5. CONTAINER CAPACITIES

20 FT CONTAINERS IN HOLD	108	pcs
40 FT CONTAINERS IN HOLD	48	pcs
45 FT CONTAINERS IN HOLD	32	pcs
20 FT CONTAINERS ON THE HATCHES	98	pcs
40 FT CONTAINERS ON THE HATCHES	36	pcs



6. MAIN PROPULSION EQUIPMENT

1 MAIN ENGINE

- **MAKE:** MAK 8M20, non reversible 1520 kW MCR at 1.000 rpm
- **FUEL CONSUMPTION:** about 190 g/kWh at 100% MCR
- **LO CONSUMPTION:** about 0,6 g/kWh at 100% MCR

1 ELASTIC COUPLING

- **MAKE:** Vulkan

1 GEARBOX

- **MAKE:** Renk, abt. 170 rpm on prop.
- **SHAFT:** PTO revolutions 1500 rpm

1 CONTROLLABLE PITCH PROPELLER

- **MAKE:** Berg, Ni Al-bronze

1 BOW TRUSTER INSTALLATION (VARIABLE SPEED) 300 kW_e

7. ADDITIONAL ER EQUIPMENT

1 SHAFT GENERATOR:	300 kVA
1 AUX. GENERATOR:	200 kW _e at 1.500 rpm, 3x400 V, 50 Hz.
1 EM. GENERATOR:	192 kW _e at 1.500 rpm, 3x400 V, 50 Hz.
2 STARTING AIR COMPRESSORS:	15 m ³ /h at 30 bar.
2 BILGE / BALLAST PUMPS CAPACITY:	150 m ³ /h at 1,4 bar.
1 BILGE / HEELING PUMP CAPACITY:	300 m ³ /h at 1,2 bar.
1 GENERAL SERVICE PUMP CAPACITY:	55 m ³ /h at 4,6 bar.
1 FIRE FIGHTING PUMP CAPACITY:	55 m ³ /h at 4,6 bar.
1 BILGE WATER SEPERATOR:	720 lit/h
2 EJECTORS WITH CAPACITY:	35 m ³ /h
1 GO SEPARATOR:	500 Lit/h at GO-DMA
2 FO TRANSFER PUMPS CAPACITY:	2,4 m ³ /h at 2 bar.



7.1 BILGE/BALLAST/HEELING SYSTEM TO COMPLY WITH OPEN TOP SAILING

BILGE CAPACITY TO COMPLY WITH OPEN TOP WATER INGRESS CALCULATION, TANK TESTING AND MSC/CIRC 608/REV.1 SYSTEM CONFIGURATION IS DETERMINED FOR INGRESS OF 400 MM WATER PER HOUR. (246 m³/h) MAXIMUM ALLOWED INGRESS. ACTUAL INGRESS OF WATER DURING TEST WAS MAX. 52 m³/h.

THE BALLAST SYSTEM IS REMOTE CONTROLLED FROM BOTH THE ER AND THE BRIDGE. A TANK CONTENT MEASURING SYSTEM IS INSTALLED TO MEASURE THE CONTENT OF ALL BALLAST TANKS AND IS CONNECTED TO THE LOADING COMPUTER.

7.2 BALLAST WATER TREATMENT

BALLAST WATER TREATMENT SYSTEM TO BE SORTED OUT TO FULFILL NEW REQUIREMENTS.

8. ELECTRICAL INSTALLATION

POWER SUPPLY: 400 Volt, 50 Hz.

LIGHTING SUPPLY VOLTAGE: 230 Volt, 50 Hz.

EMERGENCY SUPPLY VOLTAGE: 24 Volt DC

1 MAIN SWITCHBOARD SHALL BE PROVIDED FOR THE SWITCHING AND PROTECTION OF THE AUXILIARY GENERATOR, EM. GENERATOR, SHAFT GENERATOR, SHORE CONNECTION AND OUTGOING 400 VOLT AND 230 GROUPS. CONTINUOUS LOAD SHARING IS PROVIDED BETWEEN THE AUX. GENERATOR AND THE EM. GENERATOR DURING LOADING AND UN-LOADING PURPOSES.

IN SEA MODE A TAKE-OVER FUNCTION IS PROVIDED BETWEEN THE AUX. GENERATOR AND THE SHAFT GENERATOR.

IN HARBOR MODE A TAKE-OVER FUNCTION IS PROVIDED BETWEEN DE AUX. GENERATOR AND THE SHORE POWER.

1 EMERGENCY SWITCHBOARD, EQUIPPED FOR THE SWITCHING AND PROTECTION OF THE EMERGENCY GENERATOR, SUPPLY FROM THE MAIN SWITCHBOARD AND THE OUTGOING 400 VOLT AND 230 VOLT GROUPS.



FURTHER THE ALARM AND MONITORING INSTALLATION SHALL CONSIST OF:

- General Alarm
- Fire Detection alarm, incl. heat and smoke detection
- Engine room and bridge alarm and monitoring
- CO2 extinguishing plants for engine room and cargo hold incl. alarms and auto stops

NOTE: Experience has shown that it might be advisable to install two Aux. generators in stead of one. Further the size of the Em. Generator could be reduced.

9. RUDDER AND STEERING GEAR

1 FLAP

- **TYPE:** Rudder
- **MAKE:** Benes

1 ELECTRO/HYDRAULIC RAM

- **TYPE:** Steering Gear
- **MAKE:** Promac

1 200 KW ELECTRICAL DRIVEN BOW THRUSTER

- Driven by a frequency converter which is mounted in de MSB

10. VENTILATION AND HEATING

- Hold ventilation is achieved by 2 axial flow fans (Ex type) with a capacity of 6 air changes per hour
- Engine room ventilation is achieved by 2, two speed fans of which one is reversible
- Fan capacity 20.000/10.000 m³/h each

THE AIR CONDITIONING SYSTEM IS BASED ON A SINGLE DUCT SYSTEM WHICH IS SERVED BY AN AC-UNIT WHICH IS POSITIONED IN A SEPARATE AC-ROOM.

CONDITIONING, COOLING AND BASIC HEATING IS ACHIEVED BY MEANS OF THIS AC-UNIT. ON TOP OF THIS, EACH CABIN HAS ITS OWN RE-HEATER UNIT WHICH MAKES IT POSSIBLE TO CONTROL THE TEMPERATURE IN EACH CABIN SEPERATELY.

THE AC SYSTEM IS FRESH WATER COOLED VIA A BOX COOLER WHICH IS MOUNTED IN THE FORE SHIP.

THE TECHNICAL SPACES SUCH AS ENGINE ROOM, WORKSHOP, BOW TRUSTER ROOM, STEERING GEAR ROOM, AND CO2 ROOM ARE ALL HEATED BY ELECTRICAL HEATERS.



11. SANITARY SYSTEM

1 FRESH WATER GENERATOR IS MOUNTED IN THE ER AND IS HEATED BY THE COOLING WATER SYSTEM OF THE MDE.

FRESH WATER IS STORED IN TWO FW TANKS WHICH ARE POSITIONED IN THE FORE SHIP. IN THE FORE SHIP A 300 LIT. HYDROPHORE IS INSTALLED WHICH IS FED BY TWO PRESSURE PUMPS.

A BOILER AND TWO HOT WATER CIRCULATION PUMPS ARE FITTED IN THE FW SYSTEM. IN THE AFT SHIP A SMALL HOT WATER BOILER IS MOUNTED.

A SEWAGE PLANT AND A SEWAGE HOLDING TANK SITUATED IN THE FORE SHIP AND ARE SERVED BY PVC / STEEL GRAVITY SEWAGE PIPING SYSTEM. THE OVERBOARD LINES ARE MADE OUT OF GALVANIZED STEEL. A SEWAGE DISCHARGE PUMP IS MOUNTED ON THE SEWAGE UNIT. CAPACITY 10 M³/H.

12. ACCOMMODATION

THE ACCOMMODATION IS SUITABLE FOR SAILING WITH A SAFE MANNING CREW NUMBER OF 5 PERSONS (DEPENDING FLAG REQUIREMENTS) HOWEVER THE VESSEL IS EQUIPPED WITH 3 OFFICERS CABINS AND 3 CREW CABINS. BESIDES THIS CAPACITY THERE IS SPACE FOR ANOTHER 4 TEMPORARY CREW MEMBERS IN 2 DOUBLE CABINS. HOWEVER THESE CABINS CAN ONLY BE USED WHEN THE VESSEL IS SAILING AT REDUCED DRAFT OF 3,35 METERS.

FURTHER THE VESSEL IS EQUIPPED WITH A DRY PROVISION ROOM, A GALLEY, A DAY/ MESS ROOM, A CHANGE ROOM/LAUNDRY AND AN OFFICE.

IN THE AFT SHIP A SHELTER CABIN IS INSTALLED WHICH GIVES SPACE TO ONLY ONE PERSON WHY MIGHT NOT BE ABLE TO REACH THE ACCOMMODATION DUE TO BAD WEATHER.

ALL REGULAR CABINS DO ALL HAVE THEIR OWN SANITARY UNITS. THE 2 DOUBLE CABINS WHICH ARE MOUNTED ON TWEEN DECK ARE NOT EXECUTED WITH A SANITARY UNIT BUT SHOULD USE A COMMON SANITARY CABIN WHICH GIVES SPACE TO 2 TOILETS AND 2 SHOWER UNITS.

NOTE: It might be a good idea to replace the galley and the mess to a lower deck and move the 2 double cabins up.



14. DECK MACHINERY

THE FORE SHIP IS EQUIPPED WITH ONE COMBINED ANCHOR/MOORING WINCH WITH 2 MOORING DRUMS, 2 WARPING HEADS AND 2 CHAIN WHEELS. (50 KN AT 15 M/MIN.)
THE AFT SHIP IS EQUIPPED WITH ONE MOORING WINCH WITH 2 MOORING DRUMS AND 2 WARPING HEADS. (50 KN AT 15 M/MIN.)

13. DECK EQUIPMENT

LIFE SAVING EQUIPMENT:

2 Life rafts of each 16 perons on each side on boat deck
1 rescue boat, according to SOLAS placed on SB side of the boat deck

VARIOUS OTHER DECK OUTFITTING:

1 crane for MOB boat/raft and store functions
1 gantry crane for pontoon hatch operation
2 electro hydraulic cranes mounted on top of the gantry crane for handling rigging equipment, tools, etc.

FORECASTLE:

2 Bow anchors
2 Chain stoppers
5 Double bollards, some with rollers
3 chocks and 2 fairleads

AFT DECK:

2 double bollards, some with rollers
2 chocks and 2 fairleads

MID SHIP:

2 sets of double bollards

NOTE: Last two cranes might be possible to be deleted from the scope.

15. WEATHER DECK HATCH COVER AND GRAIN BULKHEADS

THE CARGO HOLD WILL BE COVERED BY 9 PIECES PONTOON HATCHES. HANDLING OF THOSE HATCHES WILL BE DONE BY MEANS OF THE GANTRY CRANE. CLEATS WILL BE MANUAL ACTING.

2 X 2 HALF HEIGHT GRAIN BULKHEADS WILL BE DELIVERED WHICH CAN BE USED AS TWEEN DECKS TOO. POSITION OF THOSE "TWEEN DECKS" CAN BE CHOSEN ON 10 DIFFERENT FIXED POSITIONS. STORAGE OF THE GRAIN BULKHEADS CAN BE DONE ON HALF THE HEIGHT AFT OF THE CARGO HOLD OR THEY CAN BE STORED ON THE AFT SHIP CARGO DECK.



WHEN SAILING IN “OPEN TOP” MODE THE PONTOON HATCHES CAN BE STOWED ON THE AFT SHIP CARGO DECK AS WELL RIGHT BEHIND THE SUPERSTRUCTURE.

WHEN THE CARGO HOLD IS CLOSED BY ALL 9 PONTOON HATCHES ONE LONG CARGO DECK IS FORMED WITH A BEAM OF 12,5 METER AND A LENGTH OF 73 METERS. SINCE THE FUNNEL IS MOUNTED ON THE SB -SIDE OF THE VESSEL BIG PIECES OF CARGO OF A WIDTH OF MORE THAN 12,5 METERS CAN BE LOADED AND TRANSPORTED EASILY.

16. NAUTICAL EQUIPMENT

THE FOLLOWING NAUTICAL EQUIPMENT WILL BE MOUNTED:

1	Magnetic compass	1	MF/HF radio system
1	Gyro compass	2	Inmarsat C satellite communication systems
1	Autopilot	1	Navtex receiver
2	X-band radars	1	EPIRB
1	Dual ECDIS system	2	SART's
2	DGPS systems	3	Portable 2 way VHF transceivers
1	Echo sounder	1	Inmarsat F satellite communication system
1	Speedlog		
1	AIS system		
1	SSAS system via inmarsat C		
2	VHF telephones		

17. PAINT SYSTEM

AREA + PAINT SYSTEM DESCRIPTION

DFT

HULL BELOW WATERLINE:

Hempadur 15570	75
Hempadur 17633	150
Hempadur 45182	75
Hempels anti fouling Olimpik	100
Hempels anti fouling Olimpik	100
	500

HULL ABOVE WATERLINE:

Hempadur 15570	50
Hempadur 17633	150
Hempathane 55210	50
	250



**COAMING, DECK, INSIDE
BULWARK, DECK MACHINERY,
RAILING, HATCH COVER CRANE,
DECK BOWTRUSTER ROOM AND
MASTS:**

Hempadur 15570	50	
Hempadur 17633	125	
Hempathane 55210	50	
		250

**SUPERSTRUCTURE, OUTSIDE
FUNNEL, BOWTRUSTER ROOM,
PAINT LOCKER AND DAVITS:**

Hempadur 15570		
Hempadur 17633	50	
Hempathane 55210	100	
		150

**HATCH COVERS, TOPSIDE
PLATES INCLUDING RUBBER
GUTTERS:**

Hempadur 15570	50	
Hempadur 17633	125	
Hempathane 55210		
		175

**HATCH COVERS BOTTOM PLATE
(UNDERSIDE):**

Hempadur 15570	50	
Hempadur 17633	80	
Hempadur 17633		130

**CARGO HOLD, GRAIN
BULKHEADS, CARGO RAIL,
ESCAPES AND VENT. DUCTS:**

Hempadur 15570	50	
Hempadur 17633	70	
Hempadur 17633	40	
		160

**CHAIN LOCKERS AND BATTERY
BOXES:**

Hempadur 15570	50	
Hempadur 17633	125	
		175

STEEL BEHIND WAINSCOTTING:

Hempadur 15570	50	
Hempalin Primer 13200	80	
		130

**ENGINE ROOM, WORKSHOP,
SERVICE ROOMS AND STEERING
GEAR ROOM, INTERNAL DECKS:**

Hempadur 15570	50	
Hempalin Primer 13200	70	
Hempalin Enamel 52140	40	
		160

**ER AND BTR BELOW FLOOR
PLATES, VOID SPACES AND
COVERDAMS:**

Hempadur 15570	50	
Hempadur 17630	125	
		175

**BALLAST TANKS + VOIDS
(ACCORDING TO PSPC
REQUIREMENTS):**

Hempadur 15570	50	
Hempadur 17633	125	
Hempadur 17633	125	
		300

**POT. FW TANKS
(BLASTING REQUIRED):**

Hempadur 85671	100	
Hempadur 85671	100	
Hempadur 85671	100	
		300

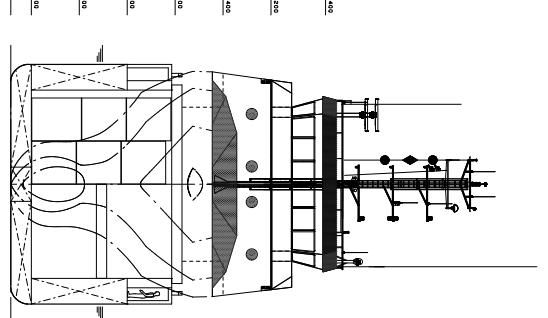
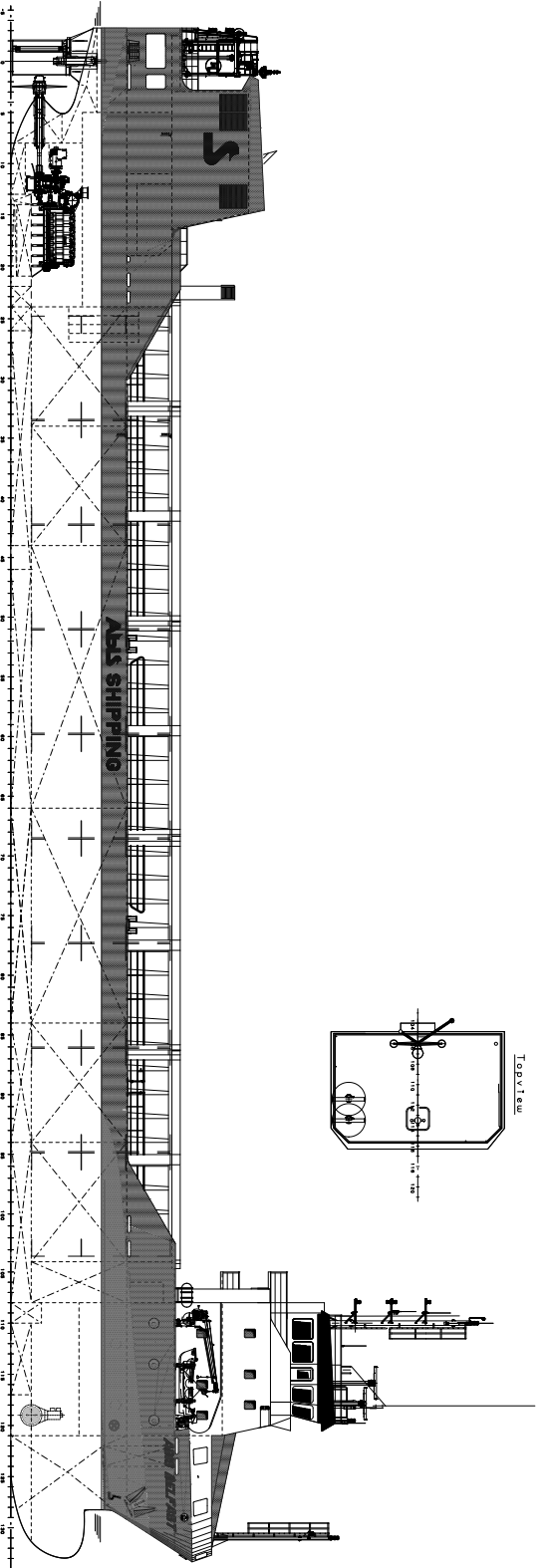
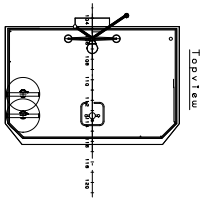
**SEWAGE TANK, CW DRAIN TANK,
HOLD BILGEWATER TANK:**

Hempadur 85671	100	
Hempadur 85671	100	
Hempadur 85671	100	
		300

**BILGE WATER COLLECTING
TANK, COOLINGWATER DRAIN
TANK:**

Hempadur 15570	50	
Hempadur 17630	125	
Hempadur 17630	125	
		300





E.R. Tweendeck 4200

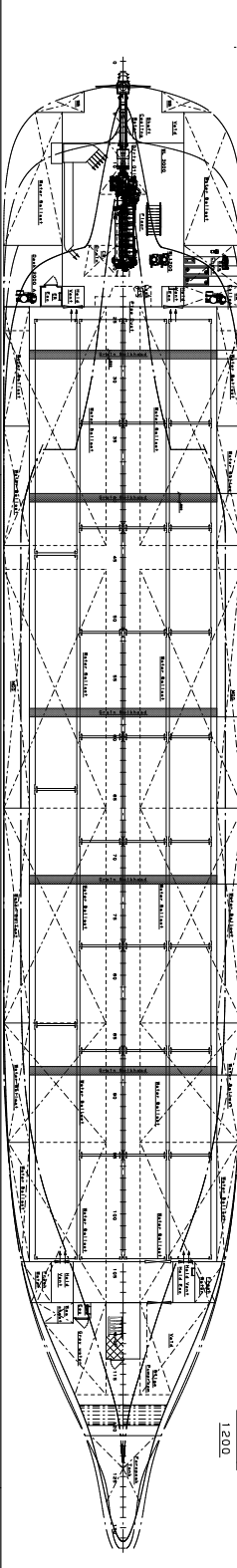
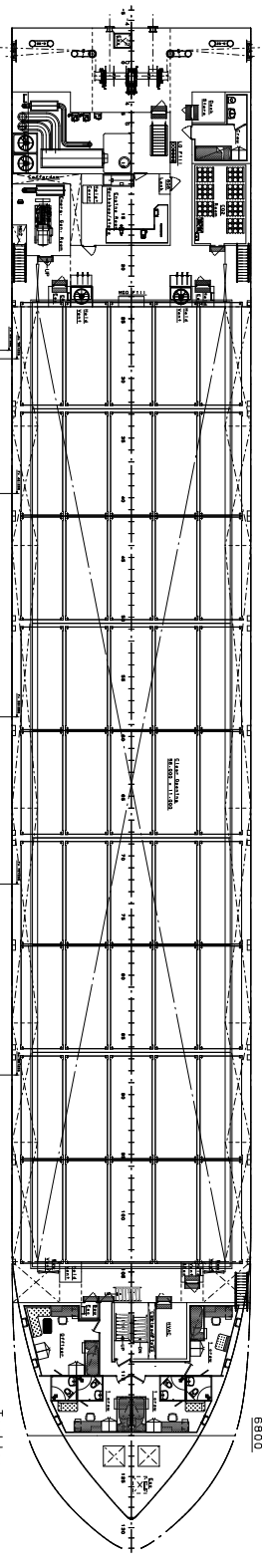
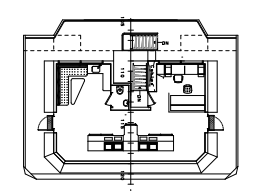
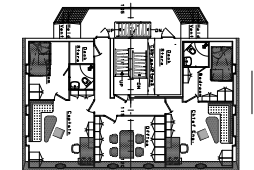
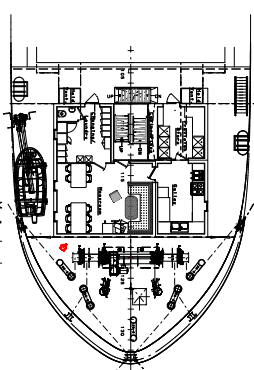
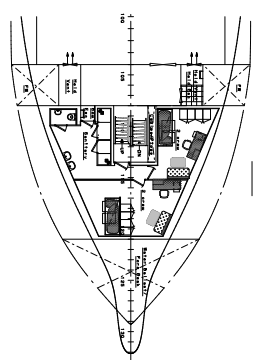
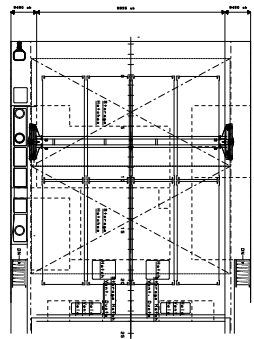
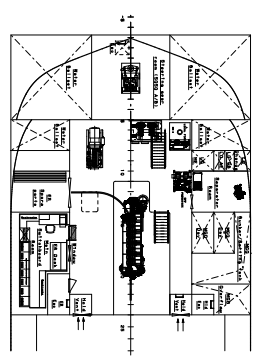
Peopdeck 9935/9450

Tweendeck 4000

Forecastle Deck 9500 above base

Captain's Deck 12400

Wheelhouse Deck 15200



VG 3800-HC

Main Particulars

Length o.a.	89.95 m
Length s.p.	84.95 m
Beam s.p.	17.40 m
Beam m.i.d.	17.40 m
Height m.i.d.	6.80 m
Design speed	5.35 m
Deadweight (Tonn)	12,000 mt
Hold Capacity 7ft. x 8ft. 178200 cu ft.	
Container capacity 20 ft. x 8 ft. 108	
Container capacity 40 ft. x 8 ft. 218	
Main Engine Power	1920 kW
Gross Tonnage	42898

General Arrangement

NO	DATE	DESCRIPTION
1	07-08-84	General Arrangement
2	08-01-84	General Arrangement
3	08-01-84	General Arrangement
4	08-01-84	General Arrangement
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50	08-01-84	General Arrangement



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